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Michael Rode

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REED SMITH, LLP

ATTN: PATENT RECORDS DEPARTMENT

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EXAMINER

ALLI, IYABO

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,985	Applicant(s) RODE ET AL.	
	Examiner IYABO S. ALLI	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/28/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgement is given to cancelled claims 1-21 and new claims 22-42.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 22, 32, 36 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding claims 22, 32, 36 and 37, the phrase "can be" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Objections

5. Claim 22 is objected to because of the following informalities: on line 5 of the claim, the word 'form' should be plural and read 'forms'. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **22-24, 26** and **31-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Heyde** (5,042,293).

As to claim 22, Heyde discloses a sample vessel (sample pump **42**) (Column 8, lines 4-6 and Fig. 2); a pump (eluent pump **48**) (Column 8, lines 56-59 and Fig. 2); and a measurement cell (solution sampler **70**) which form a unit together with a measuring device; said measurement cell (solution sampler **70**) being connected to the pump **48**, which can be regulated to vary the flow rate (in conduits **62** and **64**), and to the sample vessel **42** by a pipe (Column 10, lines 17-21 and Figs. 2 and 7); and said measuring device and the regulatable pump having electrical connections to a controlling and evaluating unit (computer **72**) (Column 10, lines 21-25).

Although, **Heyde fails to disclose** the measuring device being a spectroscopic measurement head, it would have been obvious to one skilled in the art at the time of the invention to provide a suitable component for capturing data and outputting the detected signal into a processing device so that desired parameters and characteristics of the sample under test will be able to be determined and compared to stored data.

As to claim 23, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **in addition Heyde** discloses wherein the measurement cell **70** is constructed in such a way that the sample flows (in conduits **62** and **64**) between two oppositely located windows which are integrated in the measurement cell perpendicular to the direction of flow (Fig. 2).

As to claim 24, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **in addition Heyde** discloses wherein a multi-port valve (designated **Y** and **Z**) is arranged in the pipe to produce connections to a water vessel and/or cleaning liquid vessel (Column 8, lines 38-48 and Fig. 7).

As to claim 26, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **in addition Heyde** discloses wherein the multi-port valve (designated **Y** and **Z**) has an actuating drive (valves **V1-V3**) which is connected to the controlling and evaluating unit (computer **72**) (Column 10, lines 17-25 and Fig. 5 and 7).

As to claim 31, Heyde discloses pumping a sample contained in a sample vessel by a pump through a measurement cell (solution sampler **70**) which forms a unit with a measuring device (Column 8, lines 3-11 and Fig. 2); allowing the measuring device to carry out a spectroscopic measurement of the sample flowing through the measurement cell (solution sampler **70**) using the principle of transflection (Column 7, lines 51-58); and conveying the measurement results for further processing to a controlling and evaluating unit (computer **72**) which determines components and concentrations of substances contained in the sample based on stored specific calibrations (Columns 9 and 10, lines 65-68 & 1-2 and Figs. 1 and 7).

Although, **Heyde fails to disclose** the measuring device being a spectroscopic measurement head, it would have been obvious to one skilled in the art at the time of the invention to provide a suitable component for capturing data and outputting the

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detected signal into a processing device so that desired parameters and characteristics of the sample under test will be able to be determined and compared to stored data.

As to claim 32, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **in addition Heyde** discloses wherein the pump can be regulated to ensure the flow rate of the sample required for the spectroscopic measurement (Column 7, lines 52-58 and Figs. 2 and 3).

As to claim 33, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **in addition Heyde** discloses wherein an existing water vessel is connected to the measurement cell by a multi-port valve (designated **Y** and **Z**) in order to remove residues of the measured sample from the measurement cell and prepare the measurement cell (solution sampler **70**) for the next sample (Column 8, lines 38-48 and Fig. 7).

And as to claim 34, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **in addition Heyde** discloses wherein an existing water vessel and a vessel with cleaning liquid are connected successively to the measurement cell (solution sampler **70**) by a multi-port valve (designated **Y** and **Z**) in order to clean out residues of the measured sample from the measurement cell, rinse the measurement cell (solution sampler **70**), and prepare the measurement cell for the next sample (Column 8, lines 38-48 and Fig. 7).

8. Claims **25, 27-29, 30, 35-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Heyde** (5,042,293) in view of **Etter** (2002/0179493).

As to claim 25, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **except for** wherein the multi-port valve arranged in the pipe can produce connections to one or more vessels with test liquids for self-calibration.

However, **Etter** teaches wherein the multi-port valve arranged in the pipe can produce connections to one or more vessels with test liquids for self-calibration (Page 7, paragraph 79 and Fig. 1).

It would have been obvious to one skilled in the art at the time of the invention to include the calibration technique of **Etter** in the determination method of **Heyde** in order to adjust parameters within her system based on receives output data from the measurement device, allowing comparison techniques to take place when.

As to claim 27, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **except for** wherein a device is provided for drying the measurement cell and is connected to the controlling and evaluating unit.

However, **Etter** teaches wherein a device is provided for drying the measurement cell and is connected to the controlling and evaluating unit (Page 22, paragraph 249 and Fig. 8).

It would have been obvious to one skilled in the art at the time of the invention to include the drying technique of **Etter** in the determination arrangement of **Heyde** in

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order to make sure no solution, that is not apart of the sample under measurement is left in the area designated for the sample to flow in; improving the accuracy of the detected data.

As to claim 28, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **except for** wherein a device is provided for regulating the temperature of the sample and is connected to the controlling and evaluating unit.

However, **Etter** teaches wherein a device is provided for regulating the temperature of the sample and is connected to the controlling and evaluating unit (Page 31, paragraph 353).

It would have been obvious to one skilled in the art at the time of the invention to include the device of **Etter** in the determination arrangement of **Heyde** in order to make sure that the temperature of the sample is within a desired range so that overheating or damage due to uncontrolled temperature fluctuations beyond a desired threshold is avoided.

As to claim 29, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **except for** wherein the arrangement is connected to the outlet line of a vessel arranged on a vehicle by two three-way directional valves.

However, **Etter** teaches wherein the arrangement is connected to the outlet line of a vessel arranged on a vehicle by two three-way directional valves (Pages 7 & 50, paragraphs 79 & 597 and Fig. 1).

As to claim 30, Heyde discloses all of the claimed limitations as applied to Claim 22 above, **except for** wherein the arrangement is mounted in its entirety on a vehicle for dispensing pumpable organic waste, and the through-flow volume of an outlet valve provided in the outlet line of the vessel is regulated by the controlling and evaluating unit.

However, **Etter** teaches wherein the arrangement is mounted in its entirety on a vehicle (**rails cars**) for dispensing pumpable organic waste, and the through-flow volume of an outlet valve provided in the outlet line of the vessel is regulated by the controlling and evaluating unit (Pages 7 & 50, paragraphs 79 & 597 and Fig. 1).

As to claims **29** and **30** above, it would have been obvious to one skilled in the art at the time of the invention to include the outlet valve of **Etter** in the determination arrangement of **Heyde** in order to have control of the amount of unwanted outputted sample being discarded from the area where the measurement is taking place, making sure that the remaining amount of sample is known.

As to claim 35, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **except for** wherein residual moisture is removed from the measurement cell by a device for drying after the measurement cell has been cleaned.

However, **Etter** teaches wherein residual moisture is removed from the measurement cell by a device for drying after the measurement cell has been cleaned (Page 37, paragraph 433 and Fig. 5).

It would have been obvious to one skilled in the art at the time of the invention to include the drying technique of **Etter** in the determination arrangement of **Heyde** in order to make sure no solution, that is not apart of the sample under measurement is left in the area designated for the sample to flow in; improving the accuracy of the detected data.

As to claim 36, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **except for** wherein one or more vessels with test liquids for self-calibration of the arrangement can be connected to the measurement cell by a multi-port valve.

However, **Etter** teaches one or more vessels with test liquids for self-calibration of the arrangement can be connected to the measurement cell by a multi-port valve (Page 52, paragraph 618).

It would have been obvious to one skilled in the art at the time of the invention to include the calibration technique of **Etter** in the determination method of **Heyde** in order to adjust parameters within her system based on receives output data from the measurement device, allowing comparison techniques to take place when.

As to claim 37, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **except for** wherein the sample can be temperature-controlled by a device to prevent the influence of temperature on the measurement results.

However, **Etter** teaches wherein the sample can be temperature-controlled by a device to prevent the influence of temperature on the measurement results (Page 31, paragraph 353).

It would have been obvious to one skilled in the art at the time of the invention to include the controlling method of **Etter** in the determination arrangement of **Heyde** in order to make sure that the temperature of the sample is within a desired range so that overheating or damage due to uncontrolled temperature fluctuations beyond a desired threshold is avoided.

As to claim 38, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **except for** wherein the measurement head carries out a spectroscopic measurement of the measurement cell without a sample in order to determine the degree of contamination of the measurement cell.

Although, **Heyde** in view of **Etter fails to disclose** the measuring device being a spectroscopic measurement head, it would have been obvious to one skilled in the art at the time of the invention to provide a suitable component for capturing data and outputting the detected signal into a processing device so that desired parameters and characteristics

As to claim 39, Heyde discloses all of the claimed limitations as applied to Claim 31 above, **except for** wherein the cleaning and/or drying of the measurement cell and a possible temperature regulation of the sample are/is controlled by the controlling and evaluating unit.

However, **Etter** teaches wherein the cleaning and/or drying of the measurement cell and a possible temperature regulation of the sample are/is controlled by the controlling and evaluating unit (Page 31, paragraph 353).

It would have been obvious to one skilled in the art at the time of the invention to include the drying technique of **Etter** in the determination arrangement of **Heyde** in order to make sure no solution, that is not apart of the sample under measurement is left in the area designated for the sample to flow in; improving the accuracy of the detected data.

As to claim 40, Heyde discloses pumping a sample to be measured by a pump through a measurement cell (solution sampler **70**) which forms a unit with a spectroscopic measurement head (Column 8, lines 3-11 and Fig. 2); allowing the measurement head to carry out a spectroscopic measurement of the sample flowing through the measurement cell by transmission and/or reflection (Column 7, lines 51-58); and conveying the measurement results for further processing to a controlling and evaluating unit (computer **72**) which determines components and concentrations of substances contained in the sample based on stored specific calibrations (Columns 9 and 10, lines 65-68 & 1-2 and Figs. 1 and 7).

Although, **Heyde** in view of **Etter fails to disclose** the measuring device being a spectroscopic measurement head, it would have been obvious to one skilled in the art at the time of the invention to provide a suitable component for capturing data and outputting the detected signal into a processing device so that desired parameters and characteristics

Heyde fails to disclose said sample to be measured is taken from the outlet line of a vessel arranged on a vehicle by a first three-way directional valve arranged in the

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pipe and is conveyed back into the outlet line by a second three-way directional valve arranged in the pipe after being measured

However, **Etter** teaches said sample to be measured is taken from the outlet line of a vessel arranged on a vehicle (**rails cars**) by a first three-way directional valve arranged in the pipe and is conveyed back into the outlet line by a second three-way directional valve arranged in the pipe after being measured (Page 50, paragraph 596-597)

It would have been obvious to one skilled in the art at the time of the invention to include the directional valve of **Etter** in the determination method of **Heyde** in order to sort from the sample under test, its specific elements so that comparison techniques are able to be carried out with stored data so any desired parameters will be determined.

As to claim 41, Heyde discloses all of the claimed limitations as applied to Claim 40 above, **except for** wherein an additional control signal is generated by the controlling and evaluating unit based on the determined components and concentrations of substances contained in the sample for regulating the flow through an outlet valve when dispensing pumpable organic waste.

However, **Etter** teaches wherein an additional control signal is generated by the controlling and evaluating unit based on the determined components and concentrations of substances contained in the sample for regulating the flow through an outlet valve when dispensing pumpable organic waste (Page 50, paragraph 596-597)

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And as to claim 42, Heyde discloses all of the claimed limitations as applied to Claim 40 above, **except for** wherein previously determined soil values and the instantaneous speed of the vehicle are taken into account by the controlling and evaluating unit in addition to the determined components and concentrations of substances contained in the sample in order to generate a control signal for regulating the flow through an outlet valve while dispensing pumpable organic waste.

However, **Etter** teaches wherein previously determined soil values and the instantaneous speed of the vehicle are taken into account by the controlling and evaluating unit in addition to the determined components and concentrations of substances contained in the sample in order to generate a control signal for regulating the flow through an outlet valve while dispensing pumpable organic waste (Page 62, paragraph 706).

As to claims **41** and **42** above, it would have been obvious to one skilled in the art at the time of the invention to include the control signal of **Etter** in the determination method of **Heyde** in order to be able to calibrate the system once resulting data is recorded, so that when comparison techniques are utilized with stored data, the concentration levels are able to be determined and classified within the processing system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IYABO S. ALLI whose telephone number is (571) 270-1331. The examiner can normally be reached on M-Fr: 7:30am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IYABO S. ALLI
Examiner
Art Unit 2877
March 10, 2009 /I. S. A./
Examiner, Art Unit 2877

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